

WHAT IS CLAIMED IS:

1. A pilot channel transmission method of transmitting a pilot channel through a downlink from a base station in  
5 a CDMA mobile communication system including base stations, wherein each base station is installed in one of a plurality of cells, uses a same frequency, and divides its channels using orthogonal codes uniquely assigned to the channels, and each of the cells is identified by multiplying a  
10 spreading code assigned to each base station by the channels spread by the orthogonal codes, said pilot channel transmission method comprising the step of:

assigning, when providing each of said base stations with a plurality of orthogonal code sets to which a  
15 plurality of spreading codes are assigned, pilot channels to each of the plurality of orthogonal code sets, and transmitting at least one of the pilot channels.

2. A pilot channel transmission method of transmitting pilot channels through a downlink from a base station in  
20 a CDMA mobile communication system including base stations, wherein each base station is installed in one of a plurality of cells, uses a same frequency, and divides its channels using orthogonal codes uniquely assigned to the channels, and each of the cells is identified by multiplying a  
25 spreading code assigned to each base station by the channels spread by the orthogonal codes, said pilot channel

transmission method comprising the step of:

providing said pilot channels with a symbol rate higher than a minimum symbol rate defined in said CDMA mobile communication system.

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3. The pilot channel transmission method as claimed in claim 2, wherein the symbol rate higher than the minimum symbol rate is determined in accordance with a relationship between transmission power of each channel and channel capacity.

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4. The pilot channel transmission method as claimed in claim 1 or 2, wherein the pilot channels assigned to second and subsequent orthogonal code sets are not transmitted.

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5. A base station in a CDMA mobile communication system including base stations, wherein each base station is installed in one of a plurality of cells, uses a same frequency, and divides its channels using orthogonal codes uniquely assigned to the channels, and each of the cells is identified by multiplying a spreading code assigned to each base station by the channels spread by the orthogonal codes, said base station comprising:

a transmitter for assigning, when providing each of said base stations with a plurality of orthogonal code sets to which a plurality of spreading codes are assigned, pilot channels to each of the plurality of orthogonal code sets,

and for transmitting at least one of the pilot channels.

6. A base station in a CDMA mobile communication system including base stations, wherein each base station is  
5 installed in one of a plurality of cells, uses a same frequency, and divides its channels using orthogonal codes uniquely assigned to the channels, and each of the cells is identified by multiplying a spreading code assigned to each base station by the channels spread by the orthogonal  
10 codes, said base station comprising:

a transmitter for providing pilot channels with a symbol rate higher than a minimum symbol rate defined in said CDMA mobile communication system, and for transmitting the pilot channel.

15 7. The base station as claimed in claim 6, wherein the symbol rate higher than the minimum symbol rate is determined in accordance with a relationship between transmission power of each channel and channel capacity.

20 8. The base station as claimed in claim 5 or 6, wherein the pilot channels assigned to second and subsequent orthogonal code sets are not transmitted.

25 9. A CDMA mobile communication system comprising the base station as claimed in any one of claims 5-8.

10. A mobile station carrying out radio communication with the base station as claimed in any one of claims 5-8 while carrying out transmission power control, said mobile station comprising:

5        a measuring section for performing, using the pilot channel received from said base station, interference measurement of a traffic channel belonging to a same orthogonal code set that the pilot channel belongs to.

10      11. A mobile station carrying out radio communication with the base station as claimed in any one of claims 5-8 while carrying out transmission power control, said mobile station comprising:

15      a measuring section for performing interference measurement using a symbol period of the pilot channel received from said base station.

*Add B/T*